Chapter Two

The Structural Trends and Economic Conditions Underlying Bank Resolutions

Banks confronted significant changes in the economic and institutional environment in the 1970s and 1980s, contributing to a dramatic increase in the rate of failures. Regulations that were applied just after the Great Depression limited the activities of most depository institutions for more than four decades. Regulators set prices and costs of doing business and limited competition; banks and thrifts usually earned profits and relatively few failed. Banking in those days was a much easier enterprise; markets were insulated and inflation was low.

Two dramatic surges in inflation during the 1970s fundamentally changed the business of banking. One occurred in the mid-1970s as a result of a spike in food and oil prices. The other occurred in 1979 when oil prices surged again as a result of events tied to the revolution in Iran. These two price shocks, combined with an apparently overheating economy, were primarily responsible for the surges in the inflation rate. Both inflationary periods led to dramatic rises in commodity prices, mercurial stock and bond prices, and particularly volatile interest rates.

Interest rate volatility, coupled with advances in information processing, changed bank competition and depositor behavior fundamentally and irreversibly. Volatile inflation raised market interest rates well above regulated interest rate ceilings by the end of the 1970s. As a result, depositors withdrew funds from banks (and thrifts) to invest in instruments that promised to earn a higher rate of return. The draw of double-digit interest rates available on money market mutual funds and Treasury securities made them popular alternatives to banks and thrifts.

Profitability in the banking industry, measured by return on assets, increased moderately during the two decades before 1970.[1] The return on assets started to decline after 1979. Banks entered the 1980s facing a set of structural and economic conditions that had weakened their position in relation to other financial intermediaries both here and abroad. In response to these pressures and the increased rate of bank failures in the latter half of the 1980s, the Congress and state legislators enacted major regulatory changes by the end of the 1980s. Deregulation of depository institutions in the 1980s included a lifting of interest rate ceilings on deposits, an expansion of product lines, and the spread of interstate banking.[2] The regulatory changes were intended to allow banks to compete better with nonbank financial intermediaries. As a result, banks now operate in competitive rather than insulated markets.

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1. Information on bank profitability throughout this chapter comes from the *Federal Reserve Bulletin*.

2. The Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA) mandated the phasing out of deposit interest rate ceilings and allowed interest payment on transactions accounts; the Depository Institutions Act of 1982 (Garn-St Germain) allowed interstate mergers between banks and savings and loans; and the Competitive Equality in Banking Act of 1987 (CEBA) limited the growth of so-called nonbank banks.

Enhanced Competition and Financial Innovation

Banks as a group lost ground to open-market credit sources and nondepository financial institutions in terms of funds advanced in U.S. credit markets. Open-market credit increased dramatically during the 1980s, caused by growth in commercial paper and junk bonds. Finance companies led nonbank mediation of credit. Moreover, nondepository financial institutions compete with banks in markets for assets and liabilities. Nonbanks now offer credit cards, residential mortgages, consumer and commercial loans, and transaction accounts. By 1990, subsidiaries of such retailers as Sears Roebuck and such manufacturers as the Ford Motor Company and General Electric were financing one-third of consumer credit and one-quarter of commercial loans.[3]

Although the assets of the financial services industry (including banks) have continued to grow, the share of domestic financial assets held by U.S. commercial and savings banks decreased from about 50 percent in 1950 to 22 percent in 1991. Over the same period, pension and mutual funds grew from about 5 percent to 30 percent of financial assets. Assets held by finance companies doubled during this period, accounting for 7 percent of assets in 1991. Other depositories, life insurance firms, and nondepository institutions, including automobile companies, retail department stores, and telephone companies, make up the remaining share of assets.[4]

Increased competition and financial innovation made banking less stable in the 1980s. Continuing advances in computer technology, which increase the speed and volume of information processing, have helped to popularize new kinds of financial assets, especially off-balance-sheet instruments. Enhanced technology also facilitated the development of an increasingly international market for financial assets. Each day, global banking transactions amount to more than $1 trillion. International competition continues to threaten the domestic banking industry's ability to vie for both deposits and assets. Many of the resulting changes in financial markets directly contributed to falling revenues from interest income.

The Changing Composition of Bank Balance Sheets

The composition of bank liabilities has changed drastically since the 1970s (see Figure 4). The trend shows a decline in checkable deposits (mostly demand deposits and NOW accounts) in favor of interest-bearing liabilities. Two of the more popular forms of liabilities are certificates of deposit and money market instruments. Demand for both of these financial instruments is sensitive to movements in the market interest rate. Now, when short-term market rates move adversely, depositors respond by shifting their investments to the financial instrument with the highest return. Banks are forced to offer competitive returns to keep customers. The increased competition puts a downward pressure on interest income and increasingly exposes banks to liquidity risk.[5]

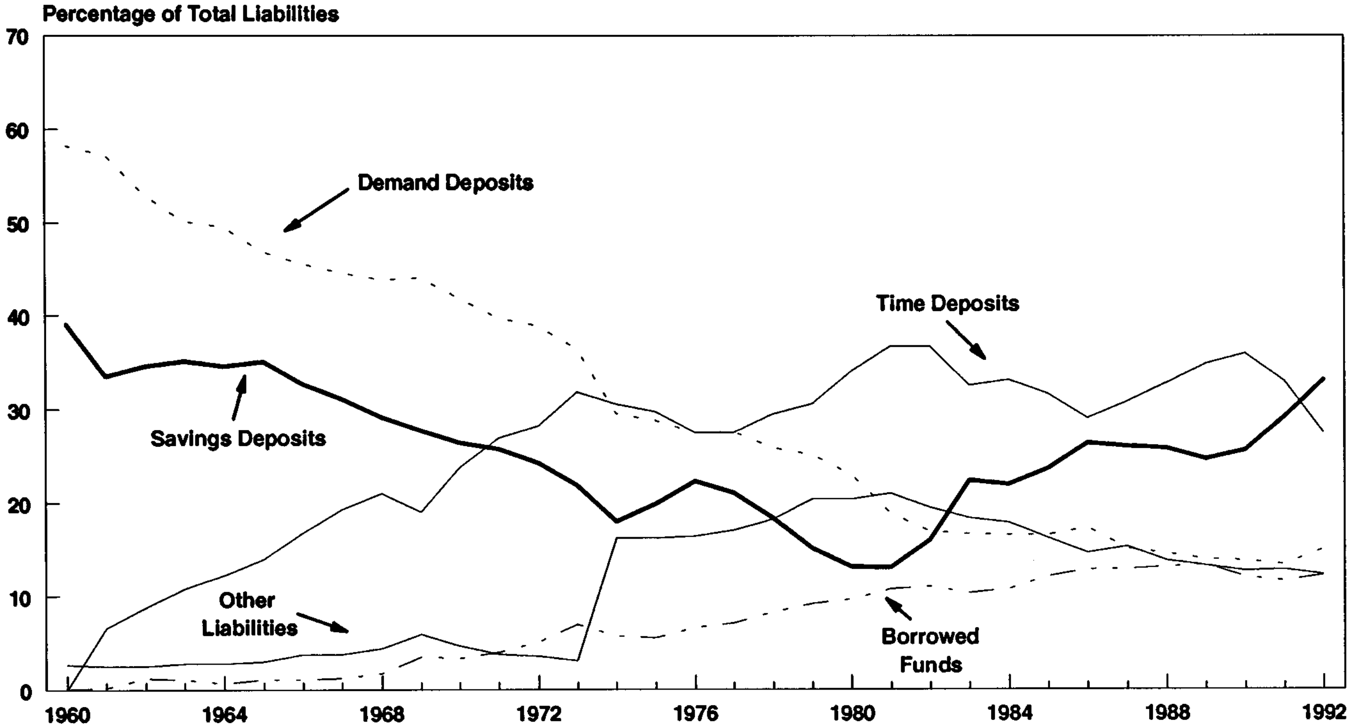
As the effects of inflation eroded the value of long-term loans, liquidity became important. Aided by improvements in data processing, the phenomenon of securitization of finance became a popular means for banks to increase their liquidity in the late 1980s. Many banks sought to turn away from a strictly buy-and-hold management strategy in which they collect funds from customers, then invest them in financial assets held until maturity. Securitization involves the pooling of a large number of individual loans into bundles that can be sold as some form of security on secondary markets. Loans for securitization have fairly uniform features, are usually well collateralized, and do not require a high level of

3. See Roger Vaughan and Edward Hill, *Banking on the Brink* (Washington, D.C.: Washington Post Company, 1992), p. 19.

4. Herbert L. Baer and Larry R. Mote, *The U.S. Financial System* (Chicago: Federal Reserve Bank, December 1990). See also Robert E. Litan, "The Revolution in U.S. Finance: Past, Present and Future" (paper presented as a Frank M. Engle lecture, The American College, Bryn Mawr, Pa., April 30, 1991).

5. James Barth, R. Dan Brumbaugh, Jr., and Robert E. Litan, *The Future of American Banking* (New York: M.E. Sharpe, Inc., 1992), p. 63.

Figure 4.
Composition of Commercial and Savings Bank Liabilities, 1960-1992



SOURCE: Congressional Budget Office based on data from the Federal Deposit Insurance Corporation, *FDIC Historical Statistics on Banking, 1934-1992* (September 1993).

NOTE: Demand deposits are all deposits subject to withdrawal on demand (checking); savings deposits include all savings deposits; time deposits are all time certificates of deposit, time open accounts, and similar deposits; borrowed funds are federal funds, treasuries, mortgage indebtedness, and other liabilities for borrowed money.

of monitoring--for example, residential mortgages, automobile loans, and credit card balances.

With securitization, banks could better match the term structure of assets, transform loans to a more liquid type of asset, and eliminate some of the asset portfolio risk associated with liquidity. Banks now have the flexibility to sell financial assets to other investors if they need to shrink their asset base (and thereby increase the capital-to-asset ratio) to comply with capital standards or change strategy if operating needs or economic conditions dictate it.

Ultimately, in an increasingly competitive market, interest rates on loans become lower as the market begins to reflect reduced risk in the pricing of securitized assets.[6] Deeper secondary markets for the formerly illiquid loans caused interest rates to decline on these loans and thereby lowered interest income. As a result, securitization may have helped banks cope with the events of the 1970s and 1980s, but over the longer term it may have also eroded bank profit margins.[7] Bank profitability in the latter half of the 1980s was significantly below its average for most of the 1970s.

The composition of banking's loan portfolio changed dramatically from the mid-1970s through the 1980s (see Figure 5).[8] The major categories of bank loans include commercial and industrial loans,

6. Barth, Brumbaugh, and Litan, *The Future of American Banking*, p. 63.

7. Ibid., p. 64.

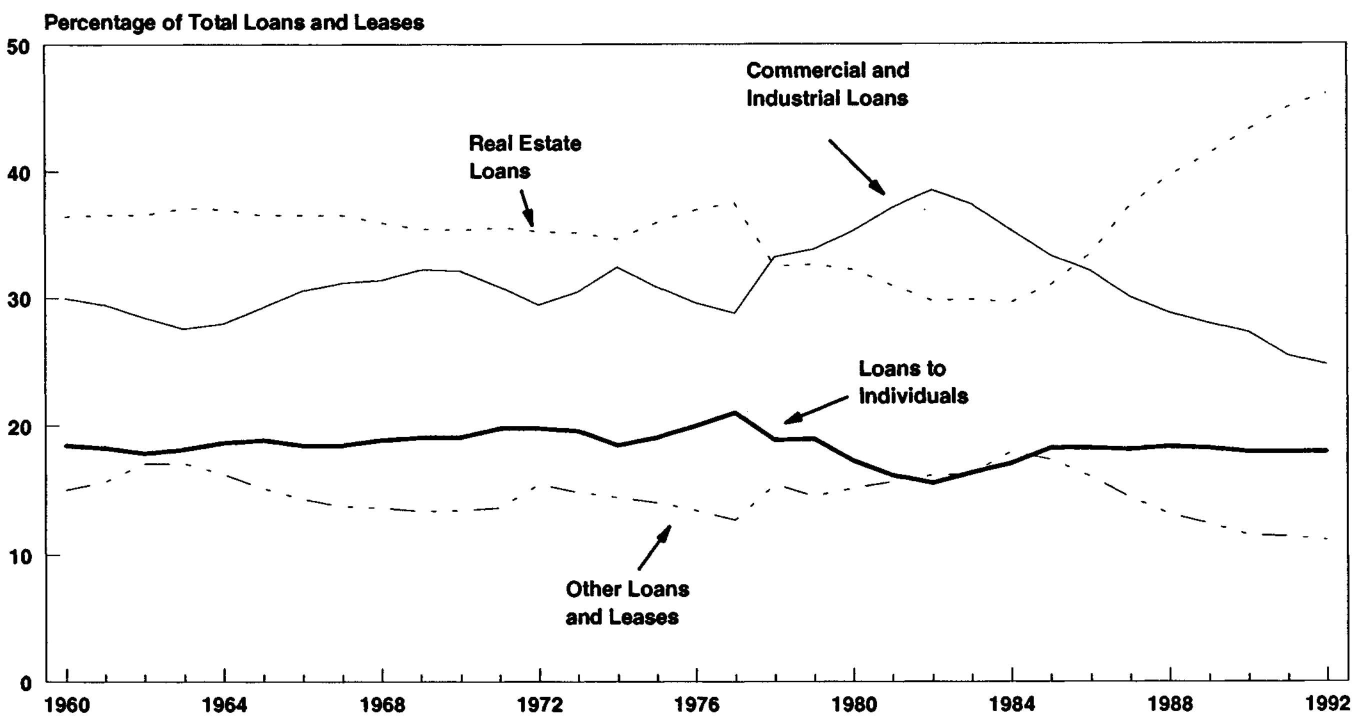
8. Information on the change in the composition of bank assets comes from Barth, Brumbaugh, and Litan, *The Future of American Banking*; and John H. Boyd and Mark Gertler, "U.S. Commercial Banking: Trends, Cycles, and Policy," Working Paper No. 4404 (National Bureau of Economic Research, Cambridge, Mass., July 1993).

mortgages, and consumer credit. Commercial and industrial loans decreased during the 1980s from 21 percent to 19 percent of assets. The fall in commercial and industrial loans was caused in part by domestic competition (discussed above) and loans to U.S. firms by foreign banks. The rise in these offshore loans in the 1980s reveals the increased importance of foreign banks to commercial lending in the United States.

With the loss in share of commercial and industrial loans came a rise in the relative importance of mortgage lending from the mid-1970s through the 1980s. Banks picked up some business from savings and loans, but the shift to mortgages had already begun by the time these mortgages became available. Mortgage loans include construction and development loans as well as commercial and residential mortgages. Real estate loans increased from 15 percent to 23 percent of assets during the 1980s. The increased concentration in real estate loans exposed banks to fluctuations in the real estate market, causing the banking industry additional problems. The increase in commercial mortgages accounts for much of the growth in mortgage lending for banks in the 1980s. Although this was true for commercial banks, it was not true in general. Many of the asset problems associated with bank failures in later periods came from bad commercial mortgages (notably in Texas).

Total loans and leases grew from 55 percent to 62 percent of assets during the 1980s. Loans tend to be less liquid than securities and thus, as the

Figure 5.
Composition of Commercial and Savings Bank Loans and Leases, 1960-1992



SOURCE: Congressional Budget Office based on data from the Federal Deposit Insurance Corporation, *FDIC Historical Statistics on Banking, 1934-1992* (September 1993).

NOTE: Real estate loans include all loans secured by real estate such as single and multifamily mortgages, farmland mortgages, and mortgages or liens on business and industrial properties. Commercial and industrial loans include all loans and commercial paper for commercial or industrial purposes. Loans to individuals include all loans for auto financing, home improvement, and personal expenses.

share of these assets increases, they increase the exposure of a portfolio to liquidity risk. The ratio of loan losses to total industry loans has been rising since 1960. Loan losses decreased moderately in 1992, but the ratio of loan losses is still high compared with periods before 1960. During the 1980s banks also reduced liquidity as cash, and cash due from other depositories, fell by one-half from 18 percent of assets in 1980 to 9 percent in 1990.

Incentives for Increased Risk in Investments

Corporate borrowers had long been the mainstays of commercial bank lending and provided a good source of income. Banks typically charged these borrowers 100 basis points (1 percentage point) over the cost of funds. Blue-chip corporations with superior credit ratings soon found that uninsured investment banks could provide them with access to the commercial paper market--borrowers could attend to their short-term credit needs through corporate bonds. As a result, corporate bonds increased dramatically during the 1970s. By the end of the 1970s, corporations had obtained $124 billion through debt financing. In addition, investment banks gave corporate borrowers more access to commercial paper. They began to offer borrowers medium-term notes and other sources of credit, as well as making available to firms the ability to insure against large changes in equity value.

Rapid gains in telecommunications and computers helped blue-chip borrowers seek credit elsewhere. During the 1980s, the volume of commercial paper tripled. Between 1960 and 1989, the proportion of nonbank commercial paper issued by commercial firms grew from 10 percent to more than 75 percent. Banks had little choice but to consider alternative types of assets to replace the lost business.

As many of the high-quality assets moved off bank balance sheets, banks were left with fewer low-risk customers. Moreover, bank profit margins were challenged on both the asset and liability sides of the balance sheet through increases in interest expenses and downward pressures on interest income. These challenges to bank operations moved banks to pursue riskier management strategies in an effort to augment returns.[9] Before partial deregulation in the 1980s, regulations limited the incentive and ability of banks to pursue excessively high-risk activities. When regulations relaxed, it became increasingly important that regulators monitor bank safety, soundness, and risk and supervise banks that posed a risk of loss to the Bank Insurance Fund.

Usually, if investors anticipate that the returns on an investment will vary, they will not lend unless the expected return is high enough to compensate for the risk. It has long been recognized, however, that a fixed-rate deposit insurance system can pose a moral hazard by encouraging excessive risk taking.[10] Banks had an extra incentive to increase returns through riskier instruments since, in effect, any increase in risk was subsidized by the deposit guarantee system. The deposit insurance system subsidized risk taking by banks because during this period insurance premiums were unrelated to risk of failure. (The Federal Deposit Insurance Corporation Improvement Act of 1991 mandates that insurance premium rates take into account the risk of loss to the insurance fund.)

Evidence of Increased Risks Associated with Returns to Banks

Investment risk is defined as potential variation in expected returns to the investor. The variance (a statistical measure of variation) of both the return on assets and return on equity of banks increased throughout the 1980s, indicating the increased riskiness associated with bank capital. The popular perception that the 1980s were marked by a dramatic increase in banking risks is reinforced by an exami-

9. See Frederick T. Furlong and Michael C. Keeley, "Capital Regulation and Bank Risk-Taking: A Note," *Journal of Banking and Finance* (November 1989), pp. 883-891.

10. See Michael C. Keeley, "Deposit Insurance, Risk and Market Power in Banking," *American Economic Review* (December 1990), pp. 1183-1200. Keeley concludes that the recent increase in bank failures can be attributed to a rise in competition (resulting from deregulation), causing franchise value to decline and creating an incentive for increased risk taking.

nation of the total variance of bank stock returns.[11] From 1979 to 1990, the average return on bank stocks of a sample of 84 large bank holding companies fell in relation to a sample of nonfinancial stocks and government bonds; at the same time, the variance of stock returns increased.

Many banks began to seek returns in this competitive and fast-moving environment from what proved to be not only risky but ill-advised investments. At a time when competition was escalating, large banks, hit hardest by the loss of blue-chip customers, may have been tempted to pursue riskier forms of investment. The evidence shows that nonperforming loans constituted about 2 percent of assets for the largest banks (banks with assets greater than $10 billion) through 1985 and rose to 2.5 percent on average for the last half of the decade. By contrast, banks with assets of less than $100 billion had 1.5 percent of their assets invested in nonperforming loans, falling to 1 percent by 1990. Two examples of investments that caused significant losses--primarily for big banks with the technology and access to these markets--were loans to developing countries and junk bonds.[12]

Debt in Developing Countries. Mexico, Brazil, Chile, Argentina, and other developing countries borrowed tens of billions of dollars from U.S. banks to finance social programs and oil imports in the 1970s. These loans were fueled in part by the large amount of money placed in international banks by oil-exporting countries after the oil-price rises in the 1970s.[13] U.S. banks required little or no collateral for these loans. Many were based on tenuous assumptions about economic growth in developing countries and as a gesture of international cooperation.

Banks clearly misread the borrowers' ability to repay. As time passed, the burden of debt repayment as a percentage of national income climbed steadily. In the early 1980s, U.S. banks began to lend more funds to these countries in an effort to salvage what would have been a guaranteed default. In 1982, Mexico, Brazil, and Argentina demanded rescheduling of their payments. By the mid-1980s, developing countries owed foreign investors approximately $400 billion. U.S. money center banks --those holding more than $10 billion in assets with access to international markets--held about $50 billion of Third-World debt. In 1987, at the request of bank regulators, U.S. banks wrote off as losses about $40 billion in loans to developing countries. Compensation for these debt losses was especially noticeable because the return on assets for the banking industry fell from 0.61 percent in 1986 to 0.09 percent in 1987. By the early 1990s, the debt burden for many developing countries had been eased through debt restructuring, thereby reducing the problem for U.S. banks.

Junk Bonds. So-called "junk" bonds are high-yielding but low-rated corporate debt securities. These bonds carry ratings of BB or lower, because they are judged to be of above-average default risk. In the 1980s, many companies issued them to finance corporate acquisitions or to repay debt obligations. Banks traditionally played an important role in the financing of leveraged buyouts (LBOs) because client information gave them an advantage.[14] By requiring access to a client's cash flow and an adequate valuation of assets, traditional investments in LBOs were less risky than those that took place during the 1980s. Commercial credit companies willing to take greater risks by allowing lower credit standards began to compete very successfully with banks. Equity yields of 35 percent to 50 percent and subordinated debt yields of 25 percent to 40 percent were not uncommon for these investments in the early 1980s. With such high returns available, this financial instrument grew enormously. In fact, the volume of junk bonds grew from $1.6 billion to more than $300 billion before the collapse of the junk bond market in 1989.

11. Jonathan A. Neuberger, "Bank Stock Risk and Return," *Federal Reserve Bank of San Francisco Weekly Letter*, no. 91-38 (November 1, 1991).

12. See Vaughan and Hill, *Banking on the Brink*, p. 33.

13. David S. Holland, "The Bank and Thrift Crises--A Retrospective," *FDIC Banking Review*, vol. 6, no. 1 (Spring/Summer 1993).

14. Traditionally, banks had an advantage over virtually all other intermediaries in information-intensive lending.

Banks fueled this expansion by encouraging high interest rates and fees that amounted to 1 percent or 2 percent of principal. Concerns about creditworthiness began to erode. Loan officers found that they could more than double their banks' earnings by concentrating on LBOs rather than lending to investment-grade (more creditworthy) firms.[15] The subsequent downturn in this market imposed heavy losses on banks participating in these deals.

The Growth of Off-Balance-Sheet Activities: A Significant Sectoral Trend

The business of banking has changed considerably over the last two decades. An increasing amount of the business done by banks does not show up as either assets or liabilities--that is, it is not recorded on balance sheets. In fact, many of the traditional activities of commercial banking have moved off the balance sheet. For example, a standby letter of credit is a financial instrument in which a bank guarantees a loan made by some third party, rather than funding the loan with depositor funds. Even though the loan does not appear on the asset side of the bank's balance sheet, the risk of loss is virtually the same as if it did.

Other examples of major off-balance-sheet activities include securitization (discussed above), loan commitments, and the rapidly growing category of derivative instruments (primarily swaps and options). Banks use loan commitments essentially like a line of credit to fund planned investments. Firms anticipating needs for funds will arrange for a loan commitment. Derivative instruments involve the trading (swapping) of risks. A common example of a derivative security is an interest rate swap in which two parties exchange sequences of interest payments. A foreign exchange contract involving the exchange of a sequence of interest payments among different currencies is another derivative instrument. Option contracts give the purchaser the right to buy or sell a specified amount of a financial asset at a particular price on or before a future date of expiration.

15. Vaughan and Hill, *Banking on the Brink*.

In 1989, off-balance-sheet items accounted for approximately four times the volume of balance-sheet items.[16] Income from off-balance-sheet activities (fee income) as a percentage of total income before operating costs grew from 20 percent in 1979 to 33 percent in 1991. Despite having a decreased share of industry assets on their balance sheets, banks remain important for originating information-intensive lending. Commercial banks remain involved (directly or indirectly) in the lending of short-term working capital and therefore continue to provide an important service to businesses.[17]

Some regulators have expressed particular concern about the risk exposure of commercial banks operating in the market for derivative instruments.[18] These markets are largely unregulated, and as they evolve and technology advances, new types of securities continue to be developed at a rapid pace. There is also uneasiness that activity in derivatives is concentrated among a small group of very large commercial banks. Substantial losses on trading in derivatives could force a large bank into insolvency, which could affect derivatives markets unfavorably and perhaps damage money and exchange rate markets as well.[19] The data on derivative instruments are still preliminary and several agencies are evaluating these concerns.[20]

In addition to the recent structural changes in the financial sector and the incentives to increase returns by investing in riskier ventures, a series of adverse economic events put more stress on the financial system. Not only did interest rates rise sharply and the junk bond market collapse in the 1980s, but the economy underwent periods of recession, rapid inflation and deflation of energy prices,

16. Eileen Maloney and George Gregorash, "Banking 1989: Not Quite a Twice Told Tale," *Economic Perspectives*, Federal Reserve Bank of Chicago (July-August 1990).

17. Boyd and Gertler, "U.S. Commercial Banking."

18. E. Gerald Corrigan, "The Risk of a Financial Crisis," in Martin Feldstein, ed., *The Risk of Economic Crisis* (Chicago: University of Chicago Press, 1991), pp. 44-53.

19. Boyd and Gertler, "U.S. Commercial Banking," pp. 12-14.

20. General Accounting Office, *Financial Derivatives: Actions Needed to Protect the Financial System* (May 18, 1994).

and a stock market "break." Banks tied to regional markets suffered from declines in agriculture, energy, and real estate.

Macroeconomic Conditions, Regional Disparities, and Asset Losses

General economic conditions affect the financial condition of bank customers and therefore influence bank profitability. The 1970s and 1980s share similar business cycle patterns. Both decades began with modest recessions that grew more serious and were followed by booms. The similarities in terms of lost production and unemployment are striking. But the recession of the 1980s was marked by more severe regional dislocations than that of the 1970s. Some macroeconomists have characterized the economic environment of the 1980s as one big rolling regional recession hitting different geographic areas at different times over the decade. Lost steel production in the early 1980s preceded the oil and farm sector problems of the middle 1980s, which preceded the economic problems in New England and California in the late 1980s.

There were periods in the 1980s when the value of the dollar was high in relation to other currencies, export trade suffered, and industries such as agriculture, which rely heavily on exports, declined. During these periods, foreign competition increased against some of the more labor-intensive industries in which lower labor costs gave foreign firms a comparative advantage. In addition, changes in world prices affected the demand for the products of some important domestic industries. For example, the steel and energy industries were hit by a price-induced decline in consumer demand for those goods.

Regional Variation in Bank Failure

During the 1987-1992 period, the FDIC resolved some 7 percent of those banks in existence at the beginning of 1987, or 1,049 in all (see Table 1). Analysis reveals a strong regional pattern of higher-than-average bank resolutions associated with regions experiencing temporary economic difficulties. The Southwestern states, principally the oil state of Texas, accounted for 60 percent of the resolutions over the six-year period. The majority of these 631 resolutions occurred between 1987 and 1990, around the period when oil and real estate prices collapsed in this region. The Northeast region, accounting for about 13 percent of resolutions (132 banks) is a distant second in the number of failures. Most of the resolutions in this region occurred between 1990 and 1992 and were associated with the downturn in the real estate sector in the New England states. The West and Midwest regions combine to account for about 20 percent of resolved institutions (119 and 97 banks, respectively) over the period. These regions contain a high proportion of agricultural states. During the mid-1980s, the agriculture sector experienced a downturn that contributed to bank failures in subsequent years.

Comparing the national average of resolutions with the incidence by region, the Southwest showed a disproportionately large number of resolutions and assets held by resolved banks. In the Southwest, 20 percent of the banks in the region had to be resolved between 1987 and 1992. These resolved institutions held 32 percent of the industry assets in place at the beginning of 1987. The only other region that was significantly higher than the national average in both categories was the Northeast. It is therefore not surprising that these two regions dominated the number and costs of resolutions during this period. The Southwest and Northeast bank resolutions (631 and 132 banks, respectively) combined to account for 73 percent of the number of resolutions and about 90 percent of the losses to the Bank Insurance Fund for the 1987-1992 period.

Texas: A Special Case. There is clearly substantial interstate variation in bank failure and resolution experiences. Two states escaped without any failures between 1987 and 1992. Another 13 states experienced only one or two bank resolutions.[21] By

21. Federal Deposit Insurance Corporation, Division of Finance, Financial Reporting Branch, *Failed Bank Cost Analysis, 1986-1992* (1993).

Table 1.
Resolutions by the Federal Deposit Insurance Corporation, by Region, 1987-1992

	Number of Resolutions	Number of Banks in the Industry, December 31, 1986	Incidence of Resolution (Percent)	Assets of Resolved Banks as a Percentage of Industry Assets, December 31, 1986	Resolution Losses to the Bank Insurance Fund (Billions of dollars)
Northeast[a]	132	1,538	8.6	8.3	12.2
Southeast[b]	46	1,956	2.4	4.3	0.8
Central[c]	24	3,126	0.8	0.2	0.1
Midwest[d]	97	3,315	2.9	1.8	0.8
Southwest[e]	631	3,137	20.1	32.0	14.3
West[f]	119	1,588	7.5	1.5	1.5
Total	1,049	14,660	7.2[g]	7.5[g]	29.6

SOURCE: Congressional Budget Office using data from the Federal Deposit Insurance Corporation and W.C. Ferguson and Company.

NOTE: The regions in this table are categorized by the Federal Deposit Insurance Corporation.

a. Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, Vermont, and Washington, D.C.

b. Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

c. Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsin.

d. Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

e. Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

f. Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming.

g. Numbers are averages.

contrast, the state of Texas alone accounted for more than 50 percent of resolutions during this period. Texas banks were hit particularly hard by sectoral declines in the local oil and gas market and subsequent declines in local real estate markets. A decade of structural change in the financial services industry, combined with oil-price collapses in 1982 and 1986 and a decline of real estate in the Southwest during the 1985-1989 period, put considerable pressure on Texas banks.

Regulatory supervision showed little ability to control real estate loans by Texas banks during this period. And the fact that the frequency of examination in Texas declined during a critical period (1985-1986) made the situation worse. Despite increasing commercial and industrial vacancy rates from the early to mid-1980s, Texas banks continued to increase commercial and industrial real estate loans before 1987.[22] These banks were overexposed to what turned out to be a severe decline in the real estate market.

Asset Quality Influenced by Regional Downturns in Industries

Bankers have traditionally managed risks by rejecting those that were too costly or by diversifying portfolios to compensate for them. In the aftermath of deregulation bankers were free to price risk as

22. John O'Keefe, "The Texas Banking Crisis: Causes and Consequences, 1980-1989," *FDIC Banking Review*, vol. 3, no. 2 (Winter 1990), pp. 1-34.

they saw fit--through interest rates charged to borrowers and paid to depositors. But increased competition left banks with razor-thin profit margins and a limited ability to raise prices as a way of compensating for risk.

The economic shocks of the 1980s and the early 1990s jeopardized banks that violated some of the basic principles of risk management. These institutions typically held portfolios that were inadequately diversified and composed of loans that were poorly priced; loan officers granted loans to less creditworthy customers. Managers who increase the risk of a portfolio by concentrating assets lose more if those sectors of the economy upon which it concentrates experience a downturn. Real estate and energy-related investment are two primary examples of assets in which banks in various regions became overexposed.

Real Estate Investment. For most of the 1970s and early 1980s, real estate investment appeared to be a perfect hedge against inflation. The stock and bond markets were crippled by inflation in the 1970s. Commodity prices and exchange rates fluctuated, but real estate held its value, increasing steadily over the 1973-1974 period of inflation and well into the 1980s. Banks acted accordingly, diverting larger portions of their portfolios to real-estate-based assets.

In the early 1980s, federal tax legislation contributed to the upswing in real estate by giving the real estate industry deep tax subsidies. In particular, the Economic Recovery Tax Act of 1981 offered large depreciation deductions for commercial real estate. The prevailing high interest rates created both large passive losses and a booming tax shelter to partnership investors in real estate. Passive losses meant that investors could profitably syndicate losses through shell corporations to people with tax liabilities.

The tax subsidies that stimulated the demand for real estate investment, along with the Garn-St Germain Depository Institutions Act of 1982, allowed banks to invest more of their portfolios in real estate. The act eliminated margin limits on real estate lending. Banks and savings and loans rushed to fill the resulting demand for construction. Banks began offering debt financing with little equity. They even began to pay closing costs to attract customers.

After the recession in early 1981 and 1982, the demand for commercial space did not materialize as expected. The vacancy rate for office buildings in 31 major markets rose from 5 percent in 1980 to about 14 percent in 1983.[23] Some banks continued to exercise little caution, real estate lending continued, and credit standards began to erode. In the three years after passage of the Garn-St Germain Act, Texas commercial banks tripled their construction and land development loans. But the heavy investment in commercial real estate was not confined to Texas banks.

After partial deregulation of the industry in the early 1980s, bankers across the country invested some $350 billion in commercial real estate lending that produced 32 percent of all the existing office space in America during the 1980s. Developers were not required to demonstrate firm leases for commercial real estate development. Savings and loans, a growing competitor of banks for both loans and deposits, became willing to act as real estate equity investors through their real estate service corporations. Appraisers continued to overvalue real estate investments, justifying continued bank lending.

By 1986, vacancy rates in downtown office markets exceeded 16 percent.[24] The Tax Reform Act of 1986 reversed generous tax depreciation allowances, increased capital gains tax rates, and restricted passive loss deductions. It became evident that the real estate boom was ending. Projects once economically viable, if only as tax shelters, became losses. By 1988, nine of the top 10 banks in Texas, all exhibiting portfolios with heavy concentrations of real estate holdings, required FDIC resolution. Commercial real estate investments began to decline as excess capacity became more prominent in New England, New York, and Califor-

23. Holland, "The Bank and Thrift Crises."

24. Patric Hendershott and Edward Kane, "Office Market Values During the Past Decade: How Distributed Have Appraisals Been?" Working Paper No. 4128 (National Bureau of Economic Research, Cambridge, Mass., July 1992).

nia. Real estate loans in these areas of the country became nonperforming and eventually the default rate on them contributed to a number of bank failures. Developers with high vacancy rates declared bankruptcy and bankers had little choice but to accept vacant and semivacant properties. By 1991, the nationwide vacancy rate for commercial office space had reached 20 percent.

At the beginning of the 1980s, real estate loans made up 25 percent of the banking industry's loan portfolio. By the end of the decade, real estate constituted 43 percent of the loan portfolios of surviving banks and an even greater portion of the loan portfolios of failed banks. Surviving banks held more than $1 trillion of their assets in real estate. By the end of 1991, banks were carrying $90 billion in nonperforming real estate loans, 75 percent of which were held by 57 bank holding companies. Conservative estimates made in 1992 suggest that excess capacity in real estate sales may take 5 to 10 years to work off.[25] Economic losses associated with this overbuilding could cost $220 billion to $300 billion.

In retrospect, it is clear that some banks underpriced loans and real estate investments as they sought to increase asset volume and compete with savings and loans. Many of these banks subsequently failed. A former chairman of the FDIC, testifying before the Senate Banking Committee in 1992, suggested that "we wouldn't have a problem if banks had been prevented from lending on raw land, forbidden to make commercial real estate loans without the borrower putting up 25 percent, and required to get personal guarantees from borrowers. Those were ironclad rules 20 years ago."[26]

Energy Investment. Real estate problems, like inflation, were linked to the twin energy crises of the 1970s. The oil shortages produced a surge of economic development and growth in the Southwest. Oil companies with proven reserves undertook a flurry of domestic exploration. Banks began to finance mineral leases, exploration, and construction of corporate headquarters in the Southwest. Loans were backed by oil prices at $40 per barrel. In 1981, however, oil prices began to slide. By the mid-1980s, oil fell to $20 a barrel. When energy prices began to decline in the middle 1980s, so did the Southwest's economy. Banks that invested heavily in the oil fields of the Southwest suffered enormous losses. A significant percentage of the banks resolved in the Southwest between 1987 and 1992 were located in the oil-producing states of Texas, Oklahoma, and Louisiana.

25. Hendershott and Kane, "Office Market Values During the Past Decade," p. 69.

26. Statement of William Seidman before the Senate Banking Committee, March 31, 1992.